

REMARKS

This application is believed to be in condition for allowance. Reconsideration is respectfully requested.

**Status of the Claims**

Claims 1-3, 5 and 6 remain in this application.

**Claim Rejections-35 USC §102**

Claims 1, 2, 5 and 6 were rejected under 35 U.S.C. §102(e) as being anticipated by GAN et al. US 2003/0129484 (GAN). This rejection is respectfully traversed for the reasons below.

GAN discloses an electrochemical cell having a cathode and an anode.

The cathode has a conductive current collector 24, 30, 36. The cathode also has a first active material and a second active material. The first active material comprises a metal oxide, a mixed metal oxide, and a metal sulfide. The second active material comprises a carbonaceous chemistry such as a fluorinated carbon represented by the formula  $(CF_x)_n$ . See, for example, paragraphs [0018] to [0022] of GAN. These first and second cathode active materials are mixed with a binder material. Further, a conductive diluent is added to the cathode mixture. The cathode structure is prepared by rolling, spreading or pressing the first and second cathode mixture onto a current collector. See, for example, paragraphs [0024] and [0025] of GAN.

The anode is a thin metal sheet or foil of the anode metal, pressed or rolled on a metallic anode current collector (paragraph [0017]). The anode metal comprises alkali metal such as Li, Na and K (paragraph [0015]).

As is apparent from the above, both the anode and the cathode disclosed of GAN do not teach each and every element of claim 1.

Specifically, the anode of GAN does not comprise particles of an anode active material, i.e., "the active material layer containing particles of an active material having high capability of forming a lithium compound" as recited in claim 1. Indeed, GAN only discloses a thin metal sheet or foil as the anode active material (paragraph [0017]).

Further, GAN is silent about the use of a metallic material having low capability of forming a lithium compound, i.e., "a current collecting surface layer comprising a metallic material having low capability of forming a lithium compound" as recited in claim 1.

In addition, GAN is silent about the use of the first feature of claim 1, i.e., "current collecting surface layers of which the surfaces are adapted to be brought into contact with an electrolytic solution".

Regarding the cathode, the cathode of GAN also does

not have the claimed current collecting surface layers. Indeed, different from the claimed invention, the cathode active material layer of GAN is in direct contact with an electrolytic solution.

Thus, for the reasons stated above, it is believed that the claimed invention is not anticipated by GAN.

Therefore, withdrawal of the rejection is respectfully requested.

**Claim Rejections-35 USC §103**

Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over GAN and further in view of KAWAKAMI et al. US 6,051,340 (KAWAKAMI). This rejection is respectfully traversed for the reasons below.

As to obviousness GAN also fails to suggest the use of the claimed current collecting surface layers.

The use of the claimed current collecting surface layers successfully achieves the advantageous prevention of the anode active materials falling off from the anode during charge/discharge cycles. This advantage leads to the improved charge/discharge cycle property of a secondary battery.

It cannot be said that one of ordinary skill in the art can easily arrive at the claimed invention based on the disclosure of GAN, since GAN fails to disclose or suggest the use of the claimed current collecting surface layers, and the

unexpected advantages derived from the claimed current collecting surface layers.

KAWAKAMI cannot remedy these shortcomings of GAN for reference purposes.

Therefore, for the reasons stated above, GAN, with or without KAWAKAMI, fails to render obvious the claimed invention, and withdrawal of the rejection is respectfully requested.

#### **Conclusion**

In view of the foregoing remarks, this application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future submissions, to charge any deficiency or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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